

IN THE CLAIMS

This listing of claims replaces all prior listings:

1. (currently amended) A method in a data processing system for optimizing a program, the method comprising the steps of:
  - automatically analyzing a statistical profile of a program execution; and
  - automatically optimizing program code of the program based on at least one of the analysis, information about at least one prior compilation of the program, and information about at least one prior optimization of the program.
2. (original) The method of claim 1, wherein the program is automatically optimized during a compilation.
3. (original) The method of claim 2, wherein the program is automatically optimized during a run-time compilation.
4. (original) The method of claim 1, further comprising the steps of:
  - interrupting the program;
  - recording an execution state of the program; and
  - storing the recorded execution state to create the statistical profile.
5. (original) The method of claim 1, wherein the information about at least one prior compilation of the program includes a profile of the program implemented during the at least one prior compilation.
6. (original) The method of claim 1, wherein the information about at least one prior optimization of the program includes a profile of at least one change made to the program during the at least one prior compilation.
7. (currently amended) A computer-readable storage medium containing instructions that cause a data processing system to perform a method for optimizing a program, the method comprising the steps of:
  - automatically analyzing a statistical profile of a program execution; and

automatically optimizing program code of the program based on at least one of the analysis, information about at least one prior compilation of the program, and information about at least one prior optimization of the program.

8. (currently amended) The computer-readable storage medium of claim 7, wherein the program is automatically optimized during a compilation.

9. (currently amended) The computer-readable storage medium of claim 8, wherein the program is automatically optimized during a run-time compilation.

10. (currently amended) The computer-readable storage medium of claim 7, further comprising the steps of:

interrupting the program;  
recording an execution state of the program; and  
storing the recorded execution state to create the statistical profile.

11. (currently amended) The computer-readable storage medium of claim 7, wherein the information about at least one prior compilation of the program includes a profile of the program implemented during the at least one prior compilation.

12. (currently amended) The computer-readable storage medium of claim 7, wherein the information about at least one prior optimization of the program includes a profile of at least one change made to the program during the at least one prior compilation.

13. (currently amended) A data processing system for optimizing a program, the data processing system comprising:

a memory having an optimization program that automatically analyzes a statistical profile of a program execution, and automatically optimizes program code of the program based on at least one of the analysis, information about at least one prior compilation of the program, and information about at least one prior optimization of the program; and

a processing unit that runs the program.

14. (original) The data processing system according to claim 13, wherein the

program is automatically optimized during a compilation.

15. (original) The data processing system according to claim 14, wherein the program is automatically optimized during run-time compilation.

16. (currently amended) A data processing system having a processing unit and a memory for optimizing a program, the data processing system comprising:

means for automatically analyzing a statistical profile of a program execution; and  
means for automatically optimizing program code of the program based on at least one of the analysis, information about at least one prior compilation of the program, and information about at least one prior optimization of the program.